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MITCHELLA, L.—*M. repens*, L.; common every where in woods; N. Y.
OLDENLANDIA, Plumier, L.—*O. glomerata*, Mchx.; N. Y., *O. W. M.*; Bloomingdale and Brooklyn, *State Flora*; Closter, not rare, *Austin*.

HOUSTONIA, L.—*H. purpurea*, L.; New Jersey, *Torr. Cat.*; Var. *longifolia*, abundant on Long Island, near Jamaica, Hempstead etc.—*H. cærulea*, L.; common along Passaic, but does not occur near Closter, *Austin*; Staten Island.

VALERIANACEÆ.

VALERIANA, Tourn.—*V. officinalis*, L.; vid. § 52.

FEDIA, Gærtn.—*F. olitoria*, Vahl.; cultivated grounds, Inwood, N. Y., *W. W. Denslow*.—*F. radiata*, Michx.; fields, *Torr. Cat.*; is probably an error for the former.

DIPSACEÆ.

DIPSACUS, Tourn.—*D. sylvestris*, Mill.; not uncommon; Glen Cove, Coles.—*D. Fullonum*, L.; Orange Co., rare, *Austin*.

85. Spirodela.—In reply to a recent communication of specimens, we have received the following letter from Dr. Engelmann. Although he thinks the publication unnecessary, we yet venture to print it, as he differs from Mr. Austin in relation to the endopleura, and, of course, the subsequent terms of the series. Mr. Austin notified us, that he had not had access to his materials for comparison with other species.

St. Louis, Nov. 13, 1870.

DEAR SIR: Only to day I finished the examination of your interesting Lemna. As Prof. Hegelmeier, the accurate monographer of the family, will no doubt give us a full description and figure of this plant, from your specimens, I think it superfluous to try to anticipate him in a much less complete and satisfactory manner, but I may say that,

The fertile fronds are unusually small, only $2\frac{1}{2}$ — $3\frac{1}{4}$ mm. in the longer diameter, mostly with 5—6 ribs, or at most 7; and with 3—5 or sometimes 6 roots. *Foliaceous organs*; spiral vessels, (even in the roots,) pigment cells, and both forms of crystals, acicular and globular, as in the common form of *polyrrhiza*; stomata smaller, only 0.14—0.16 mm. in larger diameter, (whereas in that they are 0.20—0.25 mm. long.)—*Spatha* a complete sac as in *Lemna trisulca*, *gibba*, and *minor*; not a mere circular bract, as in *L. paucicostata* and others.—*Anthers*, $\frac{1}{3}$ mm. in transverse diameter, larger than those of other species, different from those of all Lemnae, (and thus confirming the genus Spirodela,) by longitudinal and not transverse dehiscence, as, in fact, Hegelmeier already surmises from Griffith's coarse but reliable figures of the East Indian plant. *Pollen grains* spirnulose, as in the whole family, as often elliptical as globose, 0.018—0.023 mm. in the different diameters and sizes; smaller than those of our *Lemna paucicostata*, (0.023—0.027 mm.) — *Pistil*, as well as anthers and utricle, strongly dotted with purple, in alcohol, brown,) subcuticular cells—*ovule*, hemitropous; hori-

zontal, as in *L. minor*; and, in the 10 or 12 flowers now examined, *always single*; spiral vessels in funiculus, which only occurs again in *L. gibba*, in this family; exostome, almost closed, while in all others it is open or even (in *L. paucicostata* and *perpusilla*,) incomplete, the endostome strongly protruding.—*Seed* horizontal and slightly compressed, the dark spot of the chalaza distinctly visible, even through the utricle, and, as in all 1-ovuled species of *Lemna*, directed backward to the base of the frond; raphe distinct, no spiral vessels observed in it; seed (apparently—the specimens examined were not completely matured—) smooth as in *Wolffia*, not ribbed as in *Lemna*; cellular spongy testa very thick; operculum distinct; endopleura, as usual in *Lemnae*, dark brown, thin; endosperm, (albumen,) considerable.—*Embryo*, cylindric almost as long as the seed, as usual in the family, [what Austin calls albumen “a,” his “s” is the starchy albumen, what he calls embryo, is the plumule.]

I take it to be a one ovuled small form of *S. polyrrhiza*.

In all the specimens examined, I find the singular circumstance of the first (anterior) stamen only being developed and protruding, (but never as far as in other species,) and the second or posterior one and the pistil being enclosed. Is this owing to the hour of the day when collected? It would be worth while to find out, whether in *Lemna* the first stamen may be developed in the morning, and the second at noon or in the afternoon.

Yours truly,

G. ENGELMANN.

86. *Imitation*.—Darwin, Wallace, and others, have pointed out numerous cases of imitation in nature for purposes of protection. An instance of imitation for offence recently fell under my observation. My attention was attracted by a wasp suspended from a panicle of *Solidago*. I at first supposed that the flower had in some way entrapped him, but, on closer inspection, found that he was in the fangs of a yellow spider of precisely the color of the blossoms.

W. H. L.

87. *The Club*—meets at the Herbarium in Columbia College, 49th Street, the last Tuesday in every month. Botanists are invited to attend.

88. *Exchanges*.—Among our correspondents are a number who wish to make exchanges. We propose occasionally to give a few lines to announcements of this sort.—Dr. Henri Van Heurck, Antwerp, Belgium; *Phænogams*.—S. B. Mead, Augusta, Ill.; the rarer plants in Gray, particularly for the novelties about New York. We have a list of his desiderata, which we shall be pleased to show to those of the Club desiring it.

89. *Migrations*.—Rev. D. R. Shoop, of Bellevue, Michigan, who is pretty familiar with the general run of plants in the western part of the region covered by Gray's Manual, and has botanized a good deal in Central and West New York, writes me that, “*Leucanthemum vulgare*, Lam., is now established in portions of every state east of the Mississippi, except, it may be, Wisconsin. It has emigrated westward from all the seaboard states. I found it four miles